

Grade 4 Academic Standards

Unit 3 Lesson

Science

Standard 1 The Nature of Science and Technology

Technology and Science

- 4.1.1 Observe and describe that scientific investigations generally work the same way in different places.

Technology and Science

- 4.1.5 Demonstrate how measuring instruments, such as microscopes, telescopes, and cameras can be used to gather accurate information for making scientific comparisons of objects and events. Note that measuring instruments, such as rulers, can also be used for designing and constructing things that will work properly.
- 4.1.8 Recognize and explain that any invention may lead to other inventions.

Standard 2 Scientific Thinking

Computation and Estimation

- 4.2.1 Judge whether measurements and computations of quantities, such as length, area, volume, weight or time, are reasonable.

Critical Response Skills

- 4.2.7 Identify better reasons for believing something than “Everybody knows that...” or “I just know” and discount such reasons when given by others.

Standard 4 The Living Environment

Human Identity

- 4.4.7 Describe that human beings have made tools and machines, such as x-rays, microscopes, and computers, to sense and do things that they could not otherwise sense or do at all, or as quickly, or as well.

Standard 6 Common Themes

Models and Scale

- 4.6.3 Recognize that and describe how changes made to a model can help predict how the real thing can be altered.

Unit 3 - Activities 1 and 3 satisfy the following Indiana academic standards:

Science

- 4.1.1 Observe and describe that scientific investigations generally work the same way in different places.
- 4.1.2 Recognize and describe that results of scientific investigations are seldom exactly the same. If differences occur, such as a large variation in the measurement of plant growth, propose reasons for why these differences exist, using recorded information about investigations.
- 4.2.1 Judge whether measurements and computations of quantities, such as length, area, volume, weight or time, are reasonable.
- 4.2.5 Write descriptions of investigations, using observations and other evidence as support for explanations.
- 4.2.7 Identify better reasons for believing something than “Everybody knows that...” or “I just know” and discount such reasons when given by others.